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XVII.—*Remarks on the Mosquito Territory, its Climate, People, Productions, &c., &c., with a Map.* By CHAS. N. BELL, Esq.

Communicated by JOHN ARROWSMITH, Esq., F.R.G.S.

DURING a residence of about sixteen years in the Mosquito territory, I had occasion to travel over the greatest part of it; and I employed all the time I could spare in surveying the courses of the rivers I had ascended, and gathering such information of those I had not, as enabled me to lay them down in this map. The rivers, lagoons, creeks, and innumerable inland water-passages will be found very accurate; and are the more valuable because they are quite imaginary as laid down on all the maps I have yet seen. The boundary of the Mosquito kingdom extended originally from Roman River to a place called "King Buppan" (in the Mosquito language, King's Anchorage), which is a small cove 20 or 30 miles south-west of the southern entrance of Chiriqui Lagoon. But the kingdom was reduced to its present dimensions by order of the British Government in the year 1842, as far as I recollect. It is now bounded by the sea from Roman River to Greytown, along the north bank of the St. John's to the branch of it called the Sarapiqui, and from thence in a straight line to Roman River mouth, but this part has never, I think, been clearly defined. It presents great variety of feature, but does not equal in grandeur of scenery the Spanish-American states W. and S. of it. From Greytown to Blewfields high mountain-ranges in a north-west and a south-east direction approach the water's edge, forming bold rocky headlands and deep bays; and the rivers in this district are very short, and very shallow and rapid. The mountains, as far as can be seen from their spurs near the sea, are composed of trap and quartz; the former being exposed to the air soon gets a coating of soft yellow-ochery earth, which falling away in scales becomes a deep and fertile soil: consequently this part of the country, up to the top of the mountains, is covered with a dense and magnificent forest; except some of the highest, which seen from the sea appear to have a cap of scrubby bushes and grass. The scenery along this part of the coast is very fine, especially on a stormy day, when the wild surf dashes in white columns up the dark basaltic cliffs, falling back in wreaths of spray, and the heavy clouds roll over the hill-tops and up the deep and narrow gorges in grand confusion. This part has never been traversed by white men, and is uninhabited except by the scanty remnant of a tribe called Ramas, in number not exceeding 200. After passing Blewfields northward, a few ridges and mounds of trap and limestone mark the retiring mountains; the country becomes quite flat and alluvial near the sea; extensive savannahs here prevail, intersected, where river or water courses traverse them, by broad

86°

85°



84°

From Surveys and Sketches
made during several years residence in the Country:
by
Cha:^s N. Bell, Esq^r.

1856.

A horizontal scale bar with a vertical line at the left end and a small tick mark at the right end. Below the bar, the text "English Miles." is written. Above the bar, the numbers 10, 20, 30, 40, and 50 are placed at regular intervals, corresponding to the markings on the scale.



belts of forest. Though of little use for the purposes of cultivation, these savannahs are by no means dreary wastes: they present all the appearance of a beautiful English park; the ground here level, there rolling and undulating in gentle hills, clothed in long but coarse wiry grass, and ornamented with clumps of the pretty "papta," or fan-palm, and groves of dark and stately pitch-pines. Occasionally is found quite an European bit of scenery, where pines, live oaks, and willows, with banks of tall fern and moss, afford shelter to troops of deer and numbers of Indian rabbits that feed on the cones and acorns. As you go inland the savannahs become overgrown and gradually give place to the forest, and the land becomes higher as it recedes from the sea.

As far as Wawa River these savannahs are only in patches within 20 or 30 miles of the sea; but beyond that to Brewer's Lagoon the whole country is savannah for 50 or 60 miles inland. From Brewer's Lagoon to Roman River there is a pretty equal distribution of forest and open land. These tracts are excellent pasturage, and the Indians raise a considerable number of fine cattle and horses on them; deer, tigers, and quails abound, and afford good sport. In the early dawn or the cool of the evening the deer come out of the patches of forest in great numbers, and the Indians kill them with guns or arrows, by concealing themselves behind the clumps of fan-palms, and keeping to leeward of them. All the savannahs that I have examined I found to consist of a subsoil of tough yellow or red clay, filled with pebbles of pure white quartz (in some places whole beds of them); over this is a stratum of 18 inches or 2 feet of a black peaty soil filled with roots of plants: this supports the grass and fan-palms, but the pitch-pine, oak, &c., send their roots far into the clay. In some places the subsoil is pure white pipeclay, with streaks of red; it is many feet in thickness, and below is generally a bed of gravel.

In consequence of this geological character, these savannahs are generally very wet; and in the rainy season every hollow becomes waist-deep in water, which takes a long time to drain off. There is a large tract of country in the neighbourhood of Cape Gracias à Dios, which is constantly wet and boggy; yet the most magnificent cattle are reared there, as fat as if they were stall-fed: they feed all day up to their knees in water, and at night resort to the knolls on which the Indians live, to sleep. This continual soaking of the feet occasions the hoofs to rot off great numbers of them, which have then to be killed.

The coast from Pearl Key Lagoon to the Cape, and from thence to Brewer's Lagoon, is a long low stretch of sandy beach, with the tall white mangrove-trees behind. From the sea it presents only the dreary aspect of an endless stretch of white surf, with an even line of green behind, without a knoll or headland to mark the

whereabouts ; and the Indians only distinguish places by certain odd-shaped trees, or patches of tall cabbage-palms which grow at the rivers' mouths. In several places, however, there are very extensive and valuable cocoanut-groves, which line the back of the beach for many miles, and yield cargoes of excellent nuts. Beyond Brewer's Lagoon the mountains again approach the sea ; and in the neighbourhood of Black River, Cape Cameron, and Roman, the land from the offing looks quite Alpine, the mountains rising to the height of 4000 feet. The ranges avoid the shore till they reach Truxillo and Omoa, in Honduras, when they descend to the water's edge.

A distinguishing feature in the Mosquito coast is the number of lagoons and the innumerable inland channels that lead from one river's mouth and from one lagoon to another : these latter are mostly shallow, with deep channels through them. Pearl Key Lagoon, however, is deep enough to allow a vessel drawing 7 feet water to sail up it. It is surrounded by densely-wooded and very fertile land, and abounds in game. Three considerable rivers run into it, but they are not navigable very far up. Blewfields Lagoon is the most picturesque of them all, having hilly shores on the west side, and the mountains at the back of Monkey Point tower over the southern end ; it is about 16 miles long and 5 broad, dotted over with numerous high and wooded islands, the resort of countless swarms of pigeons.

Into this lagoon run two large and two considerable rivers, besides numerous small streams ; and the quantity of mud which they bring down in the rainy season would seem to be filling it up, as large tracts, that the old inhabitants remember were once shoal water, are now covered with dense mangrove wood, nor will the entrance admit the size of ships it used to do.

The lagoons in the north are nearly all shallow, with low swampy shores, densely wooded with mangrove and other swamp-growing trees. They are all fresh in the rainy season, and salt in the dry ; and abound with various sorts of fish, according to the state of the water. There are also immense beds of fine oysters in almost all of them.

One cannot fail to be surprised at the great number of rivers that run into the sea along the Mosquito shore ; yet, when the quantity of rain that falls is considered, they are not more than sufficient to carry it off. After crossing the bars at their mouths, many of them are navigable for ships a long way up, and all of them for canoes of any size : some afford a convenient passage into the neighbouring Spanish states. With few exceptions, the banks are low and swampy at the mouths, but at various distances from the sea they rise and become very high ; rapids and falls abound, but are easily surmounted in the light river-canoes of the Indians. The

scenery up these rivers is quite unequalled of its kind : near the sea, as far as the salt water reaches, the banks are wooded with white, red, and black mangrove, sapodilla, Santa Maria, Saba, and a hundred other swamp-growing trees, with an underwood of small prickly-palms and bamboos. These grow close down to the water's edge, supporting innumerable flowering vines, which, covering the tops of the highest trees, fall in matted festoons into the water ; making a perpendicular wall of foliage, covered with sweet-smelling flowers of every hue, presenting an unbroken face for miles, except where a great silk-cotton tree has fallen into the river, leaving a dark door into the thickets inside, or a cabbage or hone palm thrusts its feathery top through the wall as if to get a peep of the broad river. In other places the beautiful sillico or hone palm hang over the river for miles, making a delightful arcade under their graceful branches under which to paddle when the sun is scorching on the open river.

As we get out of the reach of the sea-water the land rises, and the vegetation assumes a new aspect ; the banks are fringed with a broad band of " kboo " or scutch-grass, above which is a dense jungle of bamboos, and above all, the stately magnificent forest which the Indians call the real forest, in distinction from the tangled thickets of the lower parts of the river. Here the river winds through banks of sand and pebbles, the favourite resort of numbers of alligators, guanas, and river-tortoises, which bask in the sun in the heat of the day ; here and there enormous silk-cotton trees crown the banks, growing among the grass a little apart from the forest ; in other places the Indian fig bends over the water, sending hundreds of roots into it from its highest branches, and forming a luxurious shady retreat from the overpowering noonday heat. Higher up, the river is occasionally contracted between perpendicular rocks, overhung with beautiful " sungsung " bushes and bamboos ; which in some small rivers, bending over from either side, meet overhead, totally shutting out the sun, and casting a dark and ominous shade over the boiling river below, which rushes through the broken rocks and round the sharp bends with a dangerous velocity. Farther on it opens out again into broad sunny reaches, the sides covered with bright green grass, among which the beautiful silver-barked mountain-guava rears its lofty head, often festooned round with the pendent nests of the yellow-tail, which choose this tree, as no snakes nor monkeys can climb its smooth stem. Some of the rivers, as the Toongla, Twaka, and Laya Siksa, run for miles through cliffs of red clay, which the floods are constantly wearing away, so that large pieces of the bank are precipitated into the stream, with all their bamboos and trees upon them, which wave about in the water, and make an extraordinary appearance. The forest, though pretty open in the upper parts of the river, has occa-

sional dense patches overgrown with a small very thorny species of bamboo, called by the Indians "Sookwa," interlaced with thorny vines and cutting or razor grass. In other places large tracts are covered with a long, pointed, very tall reed, with leaves like the bamboo; large trees grow scantily among them, but no other under-wood. In other places are found groves of cahka and other prickly-palms which strew the ground with prickly leaves and seeds, making it almost impassable for the barefooted Indians, which is the more provoking as these places are the resort of droves of "Warrel" and peccary (two species of wild hog), whose favourite food is the prickly nuts of these palms. Covered as the country is with wood, the only way to get a view of it is by climbing a tall tree growing on a hill: thence you see spread out under you a sea of tree-tops, undulating in small hills, with a few elevated ranges towards the westward, but falling towards the east in a level plain, which, from its uniform colour, can hardly be distinguished from the sea; the land is intersected by innumerable little streams and ravines, but the soil is deep and fertile. On the small streams running into the main rivers are situated almost all the mahogany-works, as the mahogany-tree seldom grows near enough to the main river to allow of its being conveyed direct into it. These streams, or creeks as they are called, present the most romantic and beautiful woodland scenery that can be imagined; winding through dark moss-covered rocks, through avenues of tall trunks, or under a leafy arch of bamboos and "sungsung" trees, and the noonday sun can only penetrate the thick foliage in small patches. In places the creek opens out and lets down a blaze of sunshine, the more delightful from the gloom of the rest; while the banks of white sand and pebbles dazzle the eye as you emerge from the shady recesses. Here flocks of curassows, with their legs stretched out and covered with their wings, recline luxuriously in the sun, and numbers of guanans and tortoises crawl up to warm their chill blood; occasionally an otter emerges from the clear deep pool with a prime fish, and laying it down gambols about on the sand; flocks of little green river-swallows skim over the surface of the water, uttering their shrill cry; and gorgeous humming-birds appear for an instant at the clusters of flowers that hang over the stream, then dart into the depths of the gloomy forest again. The stillness that reigns in the woods at midday is something awful; uninterrupted save by the tinkling of the millions of crickets or the mournful cooing of the ground-dove. All Nature seems to retire to rest for a season when the sun, having reached his highest point, sends down a flood of light and drowsy heat. On a stone in the middle of the murmuring stream the snowy white egret dozes on one leg, unmindful of the little fish that venture near; the gaudy kingfisher preens his feathers on a twig over the dark pool where he is shortly to

resume his labours; and even the restless monkeys congregate in little knots on a great spreading tree, some lazily reclined on the biggest branches, some picking one another's hair; every now and then some of the more active pursue one another over the branches, then return, and cast themselves down beside the rest, and doze away for a while, with their heads bent down between their knees.

But when the cooler rays of the declining sun begin to slant through the trees, the woods wake up again as it were from a trance. In all directions are heard the cries of different birds and animals; long strings of yellow-tails wend their way to some favourite fruit-tree, uttering their whining cry; flocks of green parroquets rush through the trees with deafening screams; and the quam startles one with his loud shriek as he flies down to the ground in search of seeds. But time and ability would fail, were I to attempt to describe the varied beauties of these tropical forests under the various aspects of the seasons.

The Mosquito shore enjoys a very equal, and, considering the latitude, a very cool temperature; the thermometer seldom rising above 82° , nor falling below 71° : which may be ascribed to the extent of country covered with forest and the proximity of the sea. But, though the temperature may be regular, the climate in other respects—the changes from wet to dry, and from calm to stormy—is very irregular, and in that respect differs greatly from most tropical countries.

January sets in with cold rainy weather and strong north winds, rising at times to heavy gales, and accompanied with thin drizzling rain. February and half of March are similar; but dry norths, with bright clear weather, prevail towards the month of March, and frequent squalls from the north-east. In March, strong north-east trade-winds blow, with heavy squalls and dry weather. April is often blowy, but with very fine dry weather. All the rivers and lagoons now become salt, and sea-fish come into them in shoals; and the sea, which during the rest of the year had been of a greenish-yellow colour, now assumes a deep sea-green, from the rivers being all clear and very low. At this time the Indians set fire to the savannahs; and if the wind happens to be north, the whole country is obscured with smoke, the sun becomes as red as in an eclipse, and the smell of the fire is perceived for hundreds of miles. This is also the breeding season for beasts, birds, and fishes; and the Indians reap a rich harvest of alligator, tortoise, and guana eggs from the great sandbanks along the rivers, which are now left dry.

In May, hot dry weather with light east and south-east breezes prevail, varied at times by calms, lasting many days. Towards the end of May, signs begin to appear of the approach of the rains. Every day towards the afternoon, the clouds which are brought

over from the sea are piled in a dark bank to the westward, out of which the faint rumbling of distant thunder is heard; this is the first thunder of the year, and the Indians say it is a sign for the eggs of alligators, &c., to hatch, and to recall those stars which had been absent, and which now begin to be seen early in the night. This gathering of clouds, or land-wind banks, as it is called, is occasioned by the land breeze, which begins to be prevalent now during the night. Several circumstances connected with the land-wind deserve to be remarked.

There is a tendency in the land-wind at all times to come off from the shore, night or day, whenever the land is sufficiently cooled to permit it to act. I have often noticed that when a heavy sea-breeze comes to a sudden termination, and there is a complete lull, the clouds and rain which generally accompany such a termination having sufficiently cooled the earth, the land-wind is presently perceived, by the perfume of flowers coming off. The lulls between the tremendous and frequent easterly squalls in July are often filled up by a faint land-wind stealing timidly out to sea, to be again rudely driven back by the next squall. When this concussion of divers temperatures takes place, it immediately precipitates all the suspended moisture in the air, and the course of the two winds is plainly marked by the showers which precede them. In the dry season—from the end of February to the middle of May—the trade-winds blow stronger and more regularly than during the rest of the year, which would seem to retard the land-wind, for during that time it seldom blows, and there is sea-breeze night and day; or it is, perhaps, owing to the want of rain, when the earth being dry all night does not become sufficiently cold to counteract the strong easterly winds. The land wind is always stronger in the neighbourhood of large pieces of fresh water, which, being supplied by streams flowing through the forest, are of low temperature. I have often been surprised at the furious land-wind blowing out of Pearl Key Lagoon, while on the coast to the northward, which I had just sailed past, it was hardly sufficient to put the boat in motion. On that part of the coast from Cape Gracias à Dios to Great River, the land-wind is lighter and less frequent than on the coast to the southward: the former being low, with extensive tracts of savannah, and the latter wooded and mountainous; and the land-winds come down from the high land with a strength equal to the strongest sea-breeze. On that part of the Mosquito Coast facing east, a north-east sea-breeze is generally followed by a north-west land-wind; an east sea-breeze by a west land-wind; and a south-east sea-breeze by a south-west land-wind; but it is a curious circumstance that the latter is seldom accompanied by any land-wind. It is remarkable how close the two winds approach each other. I have frequently drifted out of a river on a raft of

mahogany with the land-wind blowing, and on turning the reach that entered the sea, found that the sea-breeze was blowing, and had been all night, to our great annoyance, as we had to stop the raft (if possible), and get back into the river, on account of the breakers. Two canoes are often seen sailing a mile or two apart, each with an opposite wind. The sea-breeze often comes in with violent squalls, showers, and waterspouts, and then a fine steady breeze succeeds during the rest of the day. At this time also most plants and trees flower, and by them the Indians know the close approach of the rains.

June very often comes in fine, but soon shows its true colours : torrents of rain deluge the country, and tremendous thunder-storms rage for six or eight days at a time ; then succeeds a short period of fine sunny weather, and the ground steams like a pot ; the rain again descends with renewed fury, every little gully becomes a raging torrent, and pools of water, breast-high, stand in the dark and dripping forest ; the rivers, full to their brim, rush along with irresistible force, bearing on their red surface great rafts of bamboos, trunks of trees, some with all their leaves upon them, islands of floating grass, piles of plantain and banana trees, and sometimes dead deer and warree ; all the low lands near the sea are flooded over, and the Indians kill numbers of game, which congregate on the rising knolls yet uncovered ; and in some settlements the houses are flooded, and the people have to remain in their canoes, and sleep on raised stages (under the eaves of the roof) till the flood subsides. The forest during these rains assumes the most dismal aspect. In the middle of the day it is nearly as dark as night, while the fitful flashes of lightning cast a sudden and unearthly glare around ; the shady nooks overhung with palms and creeping plants, which on the sunny days are regarded with delight, become ponds of water, filled with croaking frogs. No varied tints and deep shadows adorn the view ; the trees, bent down with the pouring rain, present only a vista of dark mist, unrelieved by any cheerful gleam ; and to the songs of birds and cries of animals have succeeded the roar of the rain and the growl of the distant thunder, which makes everything shake as it reverberates through the woods ; terrific squalls at times tear through the forest, wrenching off branches and uprooting the venerable patriarchs of vegetation. Towards the middle of August the weather begins to clear up, and there is generally fine weather till the end of October, with heavy squalls and showers at times, and much thunder. October always brings a period of ten or twelve days of south-west wind ; this blows off the land several hundred miles to sea, and is always accompanied by bright cool weather. A great deal of south-west wind also blows in August and September, and being unaccompanied by the cooling land-wind, the

nights are disagreeably hot ; during their continuance the weather is generally bright and sunny, and the thermometer sometimes rises above 90°.

In November heavy north-easters prevail, with dark rainy weather ; varied now and then by strong gales from the north, accompanied by thin rain and chilly weather. These northers, as they are called, are most destructive to the mahogany vessels anchored off that part of the coast lying east and west, and they are frequently dragged ashore with four anchors down.

December is similar, but dry norths are more frequent ; these blow exceedingly hard, with the most beautiful bright weather, and very cold. The sky becomes deep blue, and the stars shine out with unusual brilliancy, so much so that the Indians can foretell the coming of a dry north from the brightness of the stars. In November and December it rains very heavily for a short time, generally coming with the first north, and the rivers rise almost as high as in July. But these floods are not to be depended upon for driving mahogany or any operations connected with floods, as sometimes they do not take place at all in November ; and sometimes in December the last thunder of the year is heard, after which it ceases till the end of April or middle of May. In spite of its rainy climate and immense forests, the Mosquito territory is one of the most healthy parts of Central America. No bad epidemic sickness has visited the country in the memory of the oldest people, except the cholera, which visited it in 1855, but soon passed away. Ague is less common than might be expected ; and white people, who do not recklessly expose themselves, enjoy the best health.

The Mosquito territory is very thinly inhabited ; the entire Indian population not being supposed to exceed 10,000 or 15,000, of which the Mosquito, or principal tribe, numbers nearly the half. This tribe inhabits the whole coast from Pearl Key Lagoon to Black River, and along the banks of the Wawa and Wanx, or Wanks Rivers for a great distance inland. They are a fine set of men, lively, intelligent, and high spirited ; but they have learnt no good from the intercourse of English and American sailors, and some settlements are notorious for their rascality. They are a violent, quarrelsome set of Indians, and most terrible drinkers. From the king being of their tribe, and the remembrance of the deeds of former days, they have still a great propensity to plunder and illuse the surrounding tribes, in spite of all the king can do to prevent them. They are lazy, insolent, and have a most overweening idea of their own consequence and capabilities ; yet these questionable propensities show an impulsive nature with some character, which only needs to be properly directed and ruled, and these characteristics make them much superior to the stolid and impassive tribes surrounding them. They are kind and hospi-

table to strangers, yet they are avaricious and grasping in their dealings with one another; and exact old debts with the greatest greediness, though two generations may have passed since the time the debt was incurred.

Their indolence and occasional extraordinary activity is also a matter of surprise; nothing will induce them to work steadily for any length of time, and they devote a great part of their days to sleeping in hammocks. Yet they will pursue the chase through tangled and thorny woods with the most untiring energy; they will scarcely clear the weeds from round their houses, but will make a tedious voyage of a hundred miles in a small canoe to sell a couple of turtle, worth two dollars. Nor is their childish fear of death in some shapes, and their fearless defiance of it in others, less paradoxical. They dread sickness and war like any old woman; but will boldly face a jaguar in the woods, go through the wildest surf, over the most dangerous rapids, or swim in places full of sharks and alligators. They are grossly superstitious, and at the same time quite deficient in veneration. Yet they have many good points to set off against their faults. When working for you they will endure hunger, cold, and the greatest discomfort cheerfully, and when treated well, serve with great devotion. Their women are kind and affectionate, in spite occasionally of the worst treatment. The little government they require is carried on by the king through the head men of the villages, selected from among the oldest and most renowned for discretion and ability. By them all minor grievances are settled, while graver matters are referred to the king; they also act as quartermasters in providing men and provisions for him when he passes through their villages. The Indians are not regularly taxed, but they are expected to give contributions every year of canoes, tortoiseshell, or provisions to the king, and the head men see that this is not neglected by the respective communities. The regular taxes on imported or exported merchandise are collected by more intelligent gatherers, generally resident Englishmen.

Morality is at a low ebb among the Indians, lowest of all among the Mosquito tribe. The practice, and even the duty, of chastity is unknown, and most of the murders and bloodshed that occasionally take place are the result of quarrels about women. The laws on the subject are lax, and still more laxly carried out. An injured husband inflicts a severe beating on his unfaithful wife, and exacts goods to the value of 10 or 15 dollars from the other delinquent; and I have known men keep several wives for the sole purpose of the revenue derived from their misconduct. More frequently, however, they take the law into their own hands, and exact a more severe satisfaction than the law or custom allows. Much cannot be said of their honesty or truthfulness, but, perhaps,

it is not to be expected of a people without instruction or moral restraint of any sort.

The Mosquito Indians are excellent boatmen, and in their frail canoes they fearlessly navigate the sea, however stormy it may be. They display great daring and skill in going through the heavy surf on the beach, and will carry fresh provisions to the ships when the boats of the latter cannot go near the land. It is wonderful the dexterity with which they steer for certain banks and shoals, where the green turtle feed, far out of sight of land, and without any landmark to guide them.

The staple food which the Mosquito Indians raise is cassada and plantains, cultivated in little cleared patches along the beach and river-sides. The Indians of the interior raise Indian corn and plantains, and have always a superabundance of provisions from the superior fertility of the soil and their own greater industry. They also raise sugar-cane and a little good tobacco. Some of the villages in the interior raise chocolate, which they drink mixed with Chili pepper. They plant cotton-shrubs round their houses, and manufacture coarse cloth dyed a variety of bright colours.

The Mosquito Indians trade with the tribes of the interior for various articles which they cannot produce themselves, getting rough canoes, paddles, gourds, and calabashes, cloth, net-hammocks, skins, Indian corn, &c. &c., for English goods, salt, turtle-meat, &c. Large fleets of canoes proceed every year, in the month of May, to the hawksbill-turtle fishing on the coast southwards of Greytown, where some watch the beach at night, and catch the turtle as they crawl up to lay; and some spear them at sea with a heavy palm-wood staff, at the end of which is a notched iron peg and 20 fathoms of strong silk-grass line attached. The success of this fishing is very precarious, some getting as many as 10 or 15 backs, and some none. Others resort to the numerous keys and coral-reefs in the neighbourhood of the coast, and spear the green turtle which abound there; they get a ready sale for them in Greytown and Blewfields. That part of the tribe who live west of the Cape regularly resort to the mahogany-works of Honduras for employment, where the reward of their labour is more surely if not more easily earned. During these temporary migrations the villages are left without a man, except such as are too old to travel; and as the Indians raise no stock, it may be imagined the women are badly off for meat when all the hunters are away, but they help out their fare with crabs, oysters, a few fish caught with the line, alligator and tortoise eggs, till their natural providers return and regale them with dried turtle-meat and stores of turtle-eggs.

None of the Indians in the country can be said to practise or profess any religion. They have a general idea of and belief

in a great presiding spirit or god and in a future state, but they have no clear idea of any duties required in order to merit future happiness. They practise no religious rites of any sort, unless certain ceremonies in honour of the dead and some other superstitious practices be considered as such. In every village are found one or more persons, male or female, who undertake to cure the sick and to protect the community from evil spirits; and although their "sookias," as they call them, more frequently fail than succeed, and in spite of their palpable tricks and their rapacity, the deluded people trust them implicitly. The Indians believe that even the most trifling illness is caused by some evil spirit possessing the person, and the sookias ascribe to themselves the power of dispossessing and driving it away. For this purpose they paint their faces in some hideous devices, and then proceed to blow tobacco-smoke over the sick person, rubbing him with their hands, and muttering strange words and sounds. They fence him round with charmed and painted sticks, and forbid the approach of any woman with child, or any person who has recently assisted in burying the dead, and no person is suffered to pass to windward on any account. The actual or presumed breach of these injunctions affords a convenient loophole for want of success in the cure. For a long time after the recovery of the patient his food is brought to the sookias, who whistle for about twenty minutes some plaintive strains with incoherent muttering over it, till it is purified from the influence of the spirits. If a village is attacked by sickness, a consultation of sookias is called, who, having maturely considered the matter, and slept a night in order to inform themselves by dreams of the nature and disposition of the spirits, erect each a hut a little removed from the village, and there sit up the greater part of the night, muttering their incantations and invoking all sorts of terrible animals, real and fabulous. After they have performed these and various other ceremonies, they plant a lot of painted sticks, with a grotesque little figure in wood or wax on each, round the windward side of the village, and announce the expulsion of the spirits. But should the sickness be very obstinate, the sookias, after a consultation, inform the people that the spirits are not to be expelled, whereupon the inhabitants remove immediately, burning the infected village to the ground. The Indians believe that all game and several birds have an owner, and several sookias pretend to have seen the Master of the Warree, as he is called, whom they describe as a little man, not taller than a child, but terribly strong. He superintends and directs the various droves, drives them to their feeding-grounds, and, if they are much disturbed, leads them to remote parts of the forest. He lives in a large cave in the side of a mountain, and is attended by a guard of *white* Warree, which cannot be approached

within hearing for their excessive fierceness. Living in dark and gloomy forests, of which they do not know the extent, the ideas of the Indians naturally turn towards the mysterious and wonderful, and for want of any known inhabitants they people these unexplored tracts with fabulous monsters. The heads of several dark and shady creeks, blocked up by a mass of fallen trees and bamboos, are assigned as the abode of great "wowlas" (a species of boa constrictor). On paddling some distance up these creeks, presently a rumbling of thunder is heard at the head, and, strange to say, the stream immediately begins to flow upward with irresistible force, a fierce wind tears through the trees, and the unhappy victims are carried away, without hope of rescue, to the terrible jaws that await them. Into some of these streams nothing will induce the Indians to enter, though they are said to swarm with the fattest game, the private preserves of the spirits and monsters. In like manner, several mountain-ridges are the dwellings of a terrible monster called a "wihwin," like a horse, but with "jaws fenced round with horrid teeth," whose native place is the sea, whence he issues from time to time to his summer residence on the hills, and at night roams about the forest in search of human or other prey. The Indians sit round their fires at night listening to tales of the dreadful havoc this monster made in certain villages long ago: for, fortunately, these lamentable events never happen in the lifetime of the narrator. Not content with the real horrors of the rivers in the shape of alligators and sharks, they assign to various circling eddies and dark pools a not less formidable tenant, which they call a "leewa," or water spirit, which sucks down the unlucky bather and devours him unseen; this spirit also inhabits the sea, and occasions waterspouts and hurricanes. It would be tedious and out of place to describe all the customs of the Indians, so I will just give one or two specimens. When a woman is unwell, or has had a child, she is excluded from the village for seven or eight days. A small hut is built for her in the woods a few hundred yards from the rest of the village; at night some of the girls go and sleep with her to keep her company, or, if the nights are dark and tigers are known to be prowling round, her husband takes his gun or bow, and sleeps in a hammock near her. She must not handle or cook food, but all is prepared and carried to her. When well again, she goes to the river, bathes, puts on clean clothes, and returns to her household duties. Every child shortly after birth has what they call a "pew," or charm, tied round its neck by the sookias, which is a little bag, containing some small seeds wherewith to pay the price of being ferried over a certain river that separates this from the next world, should it die young. When a death takes place, they generally bury a bow and arrows, a gourd calabash, and knife,

and sundry other articles with the body, and carefully keep in repair a small hut built over the grave, in which they deposit from time to time such little offerings as a yard or two of cloth, a bunch of plantains, a bottle of rum, &c. They have also the custom of destroying everything belonging to a dead person, burning his clothes, splitting his canoes, and, worst of all, cutting down his fruit-trees. The female relations crop off their long black hair, as they wish no one else to touch what the departed liked to handle. The greatest offence one can offer is to mention the name of the dead. The grief displayed by the women is most passionate: they dash themselves to the earth till they are covered with blood, cast themselves into the river or the fire, and frequently steal away and hang themselves. The women are passionate also in their attachments, and suicides from jealousy and disappointed love are very common. Unfortunately, becoming a wife does not confine their errant affections, but often only serves to complicate matters still more. The Smoos, although they do not undergo to the same extent those voluntary trials of endurance which the North American Indians are said to be so fond of indulging in, yet practise something of the same sort at their drinking-bouts. As soon as they have got excited, the young men assemble together to dispute which is the strongest and most worthy of the attentions of the fair sex. Strange to say, instead of settling the question by contending one with the other, it seems more congenial to their nature to do so by trying which can endure the most from his antagonist. For this purpose the sufferer stands just as an English boy does at leap-frog, and the executioner strikes his back as hard as he can with his clenched or open hand or the point of his elbow, and to endure this without a groan is the pinnacle of their aspirations. Death sometimes occurs from the effects of it. Unlike what is usually the case with other men in similar contentions, these retire from the inspiring presence of the admiring fair, and report only conveys the deeds of the brave.

It is difficult to imagine the spirit that animates them to these painful trials; for I have known men long past the prime of life, and in possession of the persons if not the affections of a harem of wives, enter with gusto into the strife, and return covered with glory and bruises. This they call "lowta," and a young man is not worthy of a wife till he is able to endure with fortitude a stout application of the elbow to his back. There seems to be a propensity in the Indians to torture themselves in emulation. I have often seen little boys seat themselves round the fire to see which could endure longest the application of small lighted sticks to their legs or arms.

Christmas is a period of great festivity with the Indians, and

for about two weeks the scenes of riotous drunkenness are quite appalling. Every house then prepares a quantity of intoxicating drink, some as much as six or eight casks full. These drinks are generally prepared from the cassada, but often from sugarcane and pine-apples. The cassada mixture, or "mishla," as they call it, is prepared by boiling a quantity of the roots, of which about a third is chewed by the women and spat into the casks; the rest is pounded in a mortar and mixed with the chewed part, and some cane-juice and hot water poured into it. It is then covered with leaves, and left to ferment for two days, when nearly all the neighbours are invited to come and partake, and the entertainment generally lasts two or three days; as fast as it is finished in one house the company adjourn to another and another, till they have made the round of the village. The guests are sometimes invited from a distance of 60 miles, and in their turn they invite their hosts. The drink resembles buttermilk: it is sour and very strong. The other drinks, made of fermented cane-juice or pine-apple-juice, are delicious, and make those who indulge too freely furiously drunk. The drinking scenes never pass off quietly; as soon as the Indians get excited old quarrels are renewed, old grievances raked up, and high words are not long in being followed by blows. The women fly to hide all the weapons they can find, and then lend their kindly aid to separate the combatants; but, in the state in which the men are, their mediation is too often rewarded by savage blows: yet the devoted creatures pay little heed to their own wounds as long as any one dear to them is in danger, and they generally succeed in restoring peace, which is again and again interrupted till their most potent enemy, drink, has laid them all in the dust together. In these brutal exhibitions all the bad propensities of the Indians are displayed in their worst lights, and it is not till their own healths are on the point of giving way that they cease from their wild debauch and resume the quiet possession of their faculties.

The Smoos, the most numerous tribe next to the Mosquitos, inhabit the heads of all the rivers from Blewfields to Patook. They may be distinguished from the Mosquito tribe by their stolid, heavy expression, their broad faces, and flat heads. They have an absurd custom of flattening the heads of their children, as they think nothing so ugly as a round forehead. For this purpose, when the child is about a month old it is tied to a small board, and a flat piece of wood is placed over the forehead and tied by strings to the board at the back with a gentle pressure, which increases as the head grows. This is not removed for several months, and, when it is, the expression of the best-looking child is ruined. The operation gives great pain to the child; in vain they try to beguile its continual crying by tying to the board all

sorts of jingling shells and rocking it about suspended by a string, and many fine children are sacrificed to this absurd custom. The Smoos are a simple, goodnatured, hardworking people, ready to oblige, and easily imposed upon, for which reasons the Coast Indians affect to hold them in supreme contempt. They are much fairer than the Mosquito Indians, and some of the women almost approach to white. The men are the most expert hunters that can be imagined, and the skill they display in finding their way through the pathless woods is quite astonishing. They pursue their game through dense tangled thickets with the sagacity of the bloodhound; they follow the track of animals which to other men is quite imperceptible; and amid the confusion of cries and sounds in the forest the right one is noticed at once, however faint and distant. Their most effective weapon is the bow and arrow, but some use and prefer firearms. In this way they earn a hard, scanty subsistence, infinitely preferring it to the surer method of raising stock, which they never can be induced to do except a few fowls, which they seem to keep more for the look of the thing than anything else, as they very seldom eat them. The customs of the Smoos are similar to those of the Mosquito Indians already mentioned. They have the same drinking orgies at Christmas and in honour of the dead, and on these occasions the men paint their faces most elaborately with red and black paint, they tie a band of cotton cloth round their head which is covered with the most brilliant feathers, arranged in patterns sewed on it, and a broad strip of the same hangs down their back to the hips, while a plume of the beautiful tail-feathers of the red macaw sticks up over the forehead. Their only clothing is a waistcloth of their own manufacture, of various colours and patterns, and interwoven with the snowy down of the Muscovy duck and eagle. The women are more simply dressed than the men on these festivities, wearing a broad wrapper of print or blue cotton-cloth, which reaches from the waist to the middle of the leg; and the upper parts of the body, being naked, are smeared all over with a very light tint of red, which just serves to give a glow to their beautiful brown skins; round their necks are hung pounds of small red, white, and black beads, and their small wrists and ankles are adorned with the same.

The women of the Smoo and other interior tribes are far more industrious and ingenious than those of the Mosquito tribe. At their little settlements all day long one is dinned with the continual hammering necessary in the process of making the India-rubber-bark cloth, and others are occupied in weaving cloth, spinning yarn, making hammocks, bead ornaments, &c. Occasionally they follow their lords to the woods, and carry out heavy loads of game, and they show great patience and endurance in

carrying loads of provisions and firewood over long and rugged roads.

Like all the other tribes, the Smoos may have as many wives as they can keep, but the generality of them have one. When there are several wives in the same house, the oldest takes charge of the others, and directs them in the various duties of the day ; but the youngest is generally the favourite of her husband, and goes with him in all his hunting and fishing expeditions. Each wife has her own fireside, and cooks every day her own pot ; so that when the lord of the house sits down to dinner he has portions brought to him by each, which manner of proceeding is anything but economical. They have no marriage ceremony, nor anything like one. When a man sees a girl he fancies, he asks the father for her, and, if he consents, the girl is sent with her bundle of clothes and bedding to her new home. She is never consulted in the matter, and has no option but to give in. If, however, her opposition is very violent, they generally yield to her wishes : sometimes not even in that case. Girls are chosen as wives during their earliest childhood ; nor is it always considered necessary to wait till they are of a marriageable age before they are taken into the husband's charge. A widow is always considered in a certain degree the property of her late husband's relations, and they must be consulted and a price paid them before she is allowed to accept another husband, which curious fee is called "piarka-mana," or widow-money.

The Twakas are only a tribe of Smoos, with a slightly different dialect, and do not number more than 200 or 300 souls. They are a fine-looking people, well made, strong, and very fair ; they do not flatten the forehead. They dwell along the Twaka river, which is a branch of the Prinz Awala.

The Toonglas inhabit along the other branch of the same river ; they seem to be a mixed race between the Smoos and Mosquito Indians, and their dialect is nearly pure Mosquito with a large mixture of Smoo words. They are much darker than the Twakas, and resemble the Coast men as much in their laziness and rascality as their complexion, but there are some fine fellows among them. They never construct such large and comfortable houses as the Smoos and Twakas ; in the dry weather they live in miserable little sheds on the sandbanks close to the water, and of course, when the floods come, they are summarily ejected, and their sheds carried away to sea. During the rainy season they live upon the banks out of reach of the floods, but, as they intend to remove to the sandbanks when the dry season returns, they take no more pains with these houses than with those that were swept away.

The Payas are a pretty numerous tribe, and inhabit the heads of the Black and Patook rivers. They seldom visit the king, and

are only nominally subject to him ; they resemble the Smoos very much, but speak quite a different language.

The Ramas inhabit a small island at the southern extremity of Blewfields Lagoon ; they are only a miserable remnant of a numerous tribe that formerly lived on the St. John's and other rivers in that neighbourhood. A great number of them still live at the head of the Rio Frio, which runs into the St. John's River at San Carlos Fort. These latter are quite wild—if holding no intercourse with the rest of mankind can be called so ; they attack every person that attempts to ascend their river, and some twenty years ago killed the Spanish commandant of San Carlos, and nearly annihilated the party of soldiers that accompanied him for the purpose of inspecting the country. Their secluded life, and the terror they inspired on that occasion, is perhaps the origin of the reputation they bear as cannibals ; and a wag of an American once said to me that they always sat down to dinner with a cold missionary on the sideboard.

The language of the Ramas is different from any other spoken in the country. They are quite as expert boatmen as the Mosquito Indians, and more powerful and enduring ; they are certainly the finest set of Indians in the country,—large, heavy, athletic men, with stolid and even severe countenances. They use immense heavy bows, upwards of 6 feet long, but firearms are now their principal weapon. Every Christmas numbers of them come up to the town of Blewfields, and stroll about the streets in the most appalling state of riotous drunkenness.

The Cookras seem always to have been wild, like the Ramas on the Rio Frio ; and from the traditions on the subject they must have been reduced to live in that manner from the terrible wars and persecution carried on against them by the Mosquito Indians long before the Creoles and Negroes were settled in and around Blewfields. Thirty or forty years ago there were still numbers of them living in the forest round Blewfields. There are eight or ten individuals of this tribe living near Pearl Key Lagoon, who were captured when children, they say ; and as none of them are ever seen now-a-days, it is more than likely that the tribe is extinct ; and, in fact, wild savages—hardy as they are—cannot exist long in the manner they are represented to have lived. Their axes and weapons were of stone, and numbers of these are dug up round Blewfields ; they slept on the ground on a few leaves, and sheltered themselves from the rain with the leaves of the swallow-tailed palm piled on leaning branches. With big sticks they thrashed down and pulled up the long grass on the banks of the creeks and rivers, and there planted a little Indian corn and plantains, deriving the rest of their subsistence from the game which they

killed with their flint-headed arrows ; and eboe-nuts, bread-nuts, and mountain-cabbage (the heart-leaves of the mountain cabbage-palm) eked out their miserable existence. Their covering was the inner covering of the India-rubber tree beaten out, and their cooking utensils pots of clay and calabashes. Of course they had no canoes. In Blewfields and the forest round are numbers of large mounds, containing many thousand tons of cockleshells, and filled with broken pottery, stone axes, rude little images of human, warree, and parrots' heads, and horns of the warree and manatee. However plentiful the cockles may have been in Blewfields Lagoon, it must have taken centuries to accumulate such heaps of the shells, and they are attributed to the Cookras who lived round the shores of the lagoon. It is strange that no oystershells are found in these mounds, although that shellfish is now by far the most plentiful ; the roads in Blewfields are "metalled" with the shells from these heaps. Although numerous ruins, indicating a large, settled, and comparatively civilised population, are found in the surrounding Spanish states, especially Honduras, the Mosquito territory is entirely destitute of anything of the sort, and the inhabitants for ages back must have lived in the same wild, rude state they do at present. I have no doubt the peaceful and industrious settlements in Honduras and Nicaragua were periodically disturbed by inroads of the then numerous and fierce tribes issuing from the forests of the Mosquito shore, into which it would be vain to pursue them, and making off with their booty before a sufficient force could be collected to resist them ; and this predatory practice they seem to have continued long after their more peaceable neighbours had the misfortune to have the Spaniards for their protectors. I have seen a copy of a despatch sent by a governor of Cartago, in Costa Rica, to the captain-general of Guatemala, in the year 1727, grievously complaining of the inroads of the Mosquito Indians, who had burned several fine towns and made the country desolate. The despatch detailed a project for capturing the headquarters of the marauders, the settlement of Cape Gracias à Dios ; recommending the construction, under the protection of the guns of the ships, of a fort from which inroads could be carried in armed boats up the Waux and other populous rivers. It stated that the Cape settlement could raise 1000 men in a few hours : the total inhabitants now do not exceed 300. Evidences of the rapid decay of all the Indian tribes in the Mosquito territory are painfully numerous all over the country in old groves of fruit-trees, in the forest, and along the now silent banks of the rivers, and the sites of old villages abound in some of the savannahs. The Sookias confess that the land is possessed by legions of evil spirits, whom they have no

longer power to resist as their forefathers did ; and I have heard many of them, when reflecting on their younger days, prophesy that before many years the land would be without an inhabitant. Numerous reasons are assigned for the falling off of the Indian race, such as strong drink and the diseases introduced by the whites ; but any one who has studied the Indians of this country will be convinced that to their own vices they are indebted for this great punishment. As the natural result of the profligacy of both sexes, large families of children are seldom seen ; and poor living, bad clothing, and careless exposure to all weathers cut off the delicate and feeble both in infancy and old age. Although hardy and tough to an astonishing degree, yet they are liable to sudden and violent illnesses, brought on by excessive exposure. Fevers, consumption, and other complaints of the vitals are the most fatal disorders ; not a few of them are afflicted with loathsome diseases of the skin ; and the children suffer greatly from worms, for which they know no effectual remedy. If an average could be taken of their lives, I am sure it would be found very short indeed. Hale old men and women are as scarce among them as they are common among the whites and negroes. As I said before, there is no record of any epidemic sickness having ever affected these Indians, and their manner of living is quite unfavourable to the spreading of it ; neither can drink be assigned as the cause of their decadence. There is a great difference between the continual soaking of the habitual drunkard and the wild drinking-bouts the Indians indulge in twice or thrice a year, which only last a day or two, and any bad effects are soon dissipated by fresh air and exercise. The Coast Indians drink twice as much as those inland, and at the same time are on the whole much healthier, which can only be accounted for by their superior living : for while the sea and the brackish lagoons afford them abundance of turtle, large sea-fish, and shell-fish, the poor Indian in the interior hooks a scanty meal for his family of small river-fish by much patience and toil, or pursues, often unsuccessfully, the fleet game through the tangled woods. But one will naturally ask why the causes that are now acting so fatally against the tribes of this country should only of late years have begun to act. It is reasonable to suppose that, when the Indians were more numerous, they not only lived better, but had a better government, and better laws more rigidly enforced. History points to numerous instances of the deterioration of the character and morals of nations ; and the common intercourse of the Indians with the pirates and buccaneers of former times, and with unprincipled sailors and traders down to the present day, may gradually, by example and precept, have subverted all their good institutions and brought them to the state they are now in. None of the tribes in the country appear to

have a spark of their former warlike spirit left, which must be owing to the long protection accorded to them by Great Britain during the last 200 years, who having gradually brought them to the state of peaceful dependents, has coolly handed them over to the Nicaraguan Spaniards, whom the natives detest, and once kept in terror of their name. If the Mosquito Indians chose to resist this arrangement, I believe the Nicaraguans would find they had caught a Tartar, for their impenetrable forests are strong fortresses when garrisoned by hostile Indians.

The warm damp climate of the Mosquito shore favours the growth of forests of unrivalled luxuriance and grandeur: it would be foreign to the subject of this paper to describe the innumerable varieties of fine trees that grow in them. At present mahogany is the principal export, and the supply will last for centuries. It is singular that Blewfields is the most southern river on which mahogany is found; here it grows in abundance, but the Cookra River, 16 miles farther south, has none. The pencil or Spanish cedar grows in great abundance and of the largest size. *Lignum vitæ* grows to a large size, besides a great number of exceedingly hard and durable woods which are unknown in this country. Large forests of pitch-pine are found in the northern parts of the country; the wood is very dense and tough, and contains an unusual quantity of tar. Of the numerous varieties of palms there are few besides the cocoa-nuts that yield useful fruit. The "soopa" is a prickly-palm, about 30 feet high; it grows both wild and cultivated; it produces large bunches of fruit about the size of a potato, with a deep-orange skin when ripe; inside is a small black kernel, and the substance surrounding it is, when boiled, dry and mealy, and eaten with salt meat is one of the choicest morsels to be had in the country.

The hone-palm is the same which yields the palm-oil of commerce. The Indians boil the orange-coloured nuts till the stringy pulp falls away from the stone, they then squeeze and throw away the fibre and drink the rich yellow soup that remains, sometimes mixing it with mashed ripe plantains; it is exceedingly luscious and rich, and is not likely to be relished at first by a stranger, but when the taste is acquired he will duly appreciate it.

Cocoa-nuts, Indiarubber, sarsaparilla, copal, balsam copaiba, vanilla, and silk-grass, are among the natural productions of the woods; sugar, coffee, chocolate, ginger, arrowroot, cotton, &c., grow to perfection: the cultivation of the latter for commerce would perhaps be unsuccessful from the quantity of rain that prevails. All vegetables and fruits that are found in the West India Islands grow here to perfection; the latter scarcely possess the flavour and sweetness of those growing in the surrounding states, from the deficiency of dry bright weather.

The woods and savannahs are infested by the three varieties of the tiger peculiar to America, the black and spotted jaguar and the puma; they are not often dangerous to man, but destroy much cattle. The former is a fierce and powerful animal, and very dangerous to meet alone; but it is not very common except in the mountainous parts of the country. The spotted jaguar is also a powerful animal, and will kill and carry off the largest ox; the Indians are occasionally killed by them, and I knew one man who was dreadfully wounded and disfigured by one attacking him after being wounded with an arrow. I have killed them, however, with large shot. The puma is the most common and the most destructive: it seldom attacks a man. The tiger-cat is a beautiful little animal, and very destructive to poultry; it is twice the size of a cat, brindled with brown and black, and with a white chest and belly. There are two species of the opossum which are equally destructive to poultry; the smallest is mouse colour with soft fur, and the largest of an iron-grey with stiff coarse hair: this latter when disturbed emits a disgusting smell.

The "araree" or bush-dog is a large species of the weasel, about the size of a fox, of a glossy black, with a long sweeping tail. This animal, besides birds and poultry, eats fruit of all sorts, and is very fond of ripe plantains.

The ant-bear is an extraordinary animal, well known to naturalists: there is also another species of the ant-bear in these woods which is good eating.

The "warree" and pecay are species of the hog: the former is much larger than the latter; they congregate in large droves, and are occasionally very fierce and dangerous to attack; the flesh is excellent eating; both the species have a gland on the back, from which they emit a strong scent that is perceived miles off.

Two species of deer, the tapir, the agouti, the capibari or water-hog (a very inappropriate name, as it is one of the rodentia), and three species of monkeys abound in the woods. Any one who is acquainted with the fauna of Guiana and northern Brazil will have a very fair idea of the animals to be found in this country.

Curassows, quains, quails, partridges, and five or six species of pigeon are among the game-birds; and the toucans, the trogons, the macaws, and parrots adorn the scenery with their brilliant plumage. There is one large eagle which is upwards of seven feet across the wings, and hawks of every variety abound; the beautiful king vulture and the common turkey-buzzard purify the land from all dead carcasses.

Nor are the banks of the rivers wanting in song-birds to cheer the early dawn. The beautiful Banana bird has no match in variety of notes, though surpassed in sweetness by several others; the notes

of the "Peetu Yoola" (pine-apple bird) are just like a chime of church bells in a sweet silvery key, and uttered with measured composure. When dusk sets in, from some lonely ravine are heard the clear ringing notes of a covey of birds called the "Yarring Yoola:" these notes are uttered by the males of the little flocks, and are as if some one was tuning all the higher notes of a piano. All the birds lay as in Europe in April and May, and raise their broods before the rains and storms of June and July.

There are not many species of venomous snakes in the Mosquito country. The most common is the tommygoff, as it is called by the negroes; this reptile is very like the rattlesnake, both in size and colour, but without the rattle. Its bite is very bad, but not more than, I should say, 20 per cent. of those bitten die of it; the bite is more often fatal to white people and negroes than to the Indians, though the former have remedies which the latter have not. A small yellow snake not more than 8 inches long is very venomous, and the "Barber's pole," a beautiful snake marked with rings of yellow, black, and scarlet, is said to be fatally venomous; but I think it is very doubtful, as it has no poison-fangs. Among the nonvenomous is a species of boa constrictor, of which I have seen one 16 feet long, but the Indians say it grows much larger.

There is a very great variety of harmless snakes, many of the most beautiful colours. The "Plupau taya," a large snake very like the rock-snake of India, is often very savage; myself and ten men had on one occasion to jump overboard and leave the canoe to one of these snakes which we had disturbed in fun.

The great Guana lizard is found in countless numbers along the rivers, the great Indian figs which hang over the water being their favourite resort; when disturbed they plunge into the water from the tops of the highest trees, and sometimes fall into a passing canoe and are dashed to pieces. The flesh of this lizard is unsurpassed in delicacy and flavour, and the eggs are very rich. Alligators, of course, abound, and are seen basking on the sandbanks in hundreds. There is also a small species of crocodile that frequents quiet weedy pools and places full of waterlilies and rushes; it is about 5 feet long, and its flesh is eaten by the Indians, but it has a disagreeable taste of musk, otherwise it is white and tender.

A large lizard called "Ishilly" is also good eating; it is green with brown markings, and has an immense comb on its head and back: this species is chiefly found on the keys and islands. Both this lizard and the guana fall a prey to hawks and eagles, and even the puma does not despise them.

The house-lizard is a lovely and amusing little creature; the

male is black with an orange-coloured head, and the female dusky, or the colour of wet ashes with darker spots. It is most amusing to see them coursing over the floor in pursuit of flies, creeping almost imperceptibly till within a few inches and then darting upon them; when the rest discover that one has a large fly, they immediately give chase to it to try and get a piece. Their eyes are very keen, and on perceiving a fly alight on the walls, many yards off, they creep slyly round the picture-frames, &c., to hide their approach. They lay the most lovely little white eggs, with a *hard* shell, which is very unusual in the reptile tribe.

One species of lizard, called by the negroes Galley asp, is said to be very venomous; but as they attach an absurd story to it, I am not sure whether the one assertion is more credible than the other. They say that on biting, the asp immediately runs for the nearest water; the person bitten must do the same, and whichever reaches it first will survive. This lizard has a hideous appearance: its head is short, flat, and broad, with a large mouth armed with rows of small sharp teeth; the body is thick and the tail stumpy, and its colour dusky-grey, with brownish blotches; it chirps at night in a shrill, harsh manner.

The numerous sweet-smelling flowers which chiefly grow on large trees are visited by thirteen species of bees, by which the woods are stored with abundance of wild honey of the most various tastes and colours. These bees vary in size from that of the common English bee to that of about twice the size of a flea. The honey of some is thick and yellow, and of some it is nearly as liquid and as pure as spring water; one species produces honey of a dark indigo blue, which is very sweet and acid, and purges violently if too freely indulged in; all the honey-cells of these bees are circular; the cell of the largest is the size of a grapeshot, that of the smallest a little larger than a pea. None of these bees sting, instead of which they bite with their forceps; and one species emits a minute drop of a white liquid which raises a blister on the skin of a person, and is apt to turn into a sore. One species, which I believe to be more allied to the wasps than the bees, builds on the branches of high trees a large hanging paper-nest, sometimes 6 feet long and the same in circumference; this nest contains (in the month of September) several gallons of honey, and the cells are hexagonal.

Wasps are very numerous, and sometimes troublesome; the largest species of hornet will give a man fever from the pain of its sting. One species frequent the eaves of the houses; the rest suspend their large paper-nests on high trees, except one which prefers the little clumps of tangled creeping-plants and bamboos that hang low over the rivers; and I have had to jump overboard

on accidentally striking the bush with the boat, where, if we considered, the danger was greater in the remedy adopted, from the number of sharks in the water.

The ants are by far the most interesting insects in the tropics : it would take volumes to describe the innumerable varieties and their habits ; after twelve years of observation I believe I had not yet seen all the species. There are two distinct classes, the predaceous and the herbivorous ants ; the largest of the former is about an inch long, and the sting is excruciating. The most remarkable are the "Tarring" or marching-army ants : these make periodical forays in search of prey ; issuing from the woods just before the heavy rains in countless millions, they swarm into the houses at all hours of the night or day, summarily ejecting the people from one or all of the rooms. But the service they render is more than equivalent to the temporary inconvenience, as they clear the house of all reptiles and insects, even to the wasps'-nests under the eaves, which are ravished of their grubs in spite of the ineffectual rage of the parents.

The red "Weewee" is a great nuisance in plantations of cassada, yams, and maize ; they strip the plants of the leaves, which they carry away in large pieces, and their roads (which are sometimes half a mile long) are a moving mass of green : when they encounter a small stream not more than a few inches wide, they cast in hundreds of their burdens till it is bridged over. Some of the nests of this species take up nearly an acre of ground, and are only distinguished by the bushes growing round being all stripped, and by the innumerable little spouts or craters from the galleries below. I have known a horse fall into one of these nests and die there, being unable to extricate itself.

The white-wood ants are very destructive, consuming all the soft wood in a house, and mining garden-paling, &c. They construct upon trees a large black nest full of arched galleries, whence covered roads lead in all directions for a long distance. When exposed outside of their defences these ants fall a ready prey to various others, and to poultry and birds.

Some make a flimsy nest suspended to the end of a twig ; and when the tree is accidentally knocked against, the bottom of the nest falls out and the person below receives on his head a shower of enraged ants. Many of these ants on being touched leave the most nauseating smell on the fingers, which remains for hours, even although the hands are washed with soap.

The sea and rivers swarm with every variety of tropical fish. Sharks and saw-fish are the terror of the sea, and infest the rivers below the falls : it is very dangerous indeed to bathe in them till you get up among the sands and shoal water.

The finest fish in the country is found in the brackish lagoons ; it is a large species of mullet about 4 feet long. It is called Callapiever by the negroes, and Cookally by the Mosquito Indians. The only way of taking it is by the harpoon, as it will not take bait and readily jumps out of a net ; with a harpoon and torches at night the Indians kill great numbers, especially in the months of November and December.

The mullet is a most delicious fish ; it resembles the herring, and is found in large shoals in the lagoons. Sometimes in still dark nights, if you merely strike the side of the boat with your hand, they jump out of the water in thousands, and numbers fall into the canoe ; there is not a little danger of getting your eye knocked out. The Callapiever have the same habit of jumping out of the water on still nights on hearing any sudden noise, and I knew a man who was nearly killed by being struck on the side of the head in this manner. "Tooba" is a fish the Indians of the interior principally live on : it is about 9 inches long, 6 inches broad, and about twice the thickness of a person's hand ; of a purple colour upon the gills and back, and blue underneath ; it is found alive in the lagoons and the heads of the rivers ; it delights to cruise round old stumps in the dark shadow of overhanging trees, and is shot by the Indians with arrows.

"Srik" and "Saasing" are magnificent river-fish, unequalled except by the salmon of northern countries. The former is bottle-green above and silver colour below, and attains the size of 3 feet ; it affords excellent sport, and takes flies, worms, and various berries, but its choice morsel is the Indian fig, and hundreds of them congregate under these trees to eat the fruit that drops into the water. The Indians take advantage of this, and make their bait drop into the water like the fruit, when there is a rush of fish to seize it. The saasing is a thick heavy fish, clouded-brown and grey ; it delights in quiet pools where grass and reeds grow out of the water, and is never found among the rapids and falls as the above is ; it takes bait readily, and is easily killed with the arrow.

There is an infinite variety of fish in the creeks and rivers of this country, from the "Tarpum," which is 6 feet long, and weighs upwards of 150 lbs., to the blim, which is not more than 3 inches long.

The Manatee abounds in the extensive lagoons, and as far up the rivers as the sea-water reaches. The flesh of this animal is very like veal : it is streaked alternately with layers of fat and lean, and preserves well with the least possible quantity of salt ; the Indians merely dip it in the sea and hang it in the sun or smoke.

There are no fine shells on the Mosquito coast, owing to the sandy beaches, but the coral of the keys and islands is exceedingly

beautiful. When living in their native element, the various sorts of coral are covered with a gelatinous matter of the finest colours ; and looking out of a boat on a sunny day on the groves of coral, sea-fans, sponges, and polypi, with the brilliant colours dancing in the unsteady water, and gaudy fish gliding about among the branches, one can imagine himself looking through some brilliant kaleidoscope.

Immense lobsters, conchs, and whelks the size of a man's fist, are found in abundance at these coral-keys, and also a huge crab about the size of a soup-plate, with a lovely pink shell, spotted with white. Hermit-crabs roam at night over these little islands, disturbing the weary boatmen by biting their toes, fingers, or any exposed part of the body, and demolishing any remains of food left in the pots ; during the day they have all disappeared, snugly hid under little tufts of grass or at the roots of trees. In the quiet bays, protected by coral-reefs from the trembling breakers, flocks of grave pelicans sail about on the water, with their heads thrown back, and their long bills resting on their breasts, or tumble headlong from the air among the shoals of sprats, driving them in a silvery shower out of the water. The predaceous frigate-bird pursues the snowy seagull screaming round the bay, and amusing the spectator with its manœuvres to escape, till wearied out it lets fall the coveted fish, which is seized by the other before it reaches the water ; along the glaring sandy beach parties of little snipes and sand-pipers scamper along in eager pursuit of their prey, which is washed up in the rolls of seaweed by the little waves. The white circle of breakers on the reef, the dark blue sea outside, the calm bay with its back ground of rich foliage, and the light feathery clouds drifting over with the steady trade wind, form a *coup d'œil* only to be imagined in the dark and stormy north. The Mosquito country presents a rich field for the naturalist ; its plants, birds, and insects will be found different from those of the surrounding Spanish states, and it has scarcely been visited by any scientific explorer.

XVIII.—*Notes on the Rivers Arinos, Juruena, and Tapajos.* By
W. CHANDLESS, Esq.

Read, May 12, 1862.

THE accompanying map is not offered as by any means accurate in detail, my observations having been far too few, chiefly owing to the difficulty of finding clear ground, and partly on account of